

ATTACHMENT B – SCREENING LEVELS FOR TOXIC POLLUTANTS

I. INSTRUCTIONS

This Attachment contains listings of the parameters Dischargers are to analyze as part of their application for coverage under this General Board Order. The sampling requirements that are applicable to all discharges are presented in section II below, in Tables B-2 and B-3. Additional sampling requirements applicable to discharges to specific waterbodies follow in section III, in Tables B-4 through B-6. The Discharger shall compare the results of all analyses to the corresponding screening levels in Tables B-2 to B-6, where applicable, and submit them with the completed Notice of Intent (NOI). Any analyses performed for parameters without screening levels shall also be submitted to the Regional Water Board with the completed NOI.

The rationale for the screening levels in Tables B-2 through B-6 is provided in section IV.C.3 of the Fact Sheet (Attachment F) of this General Board Order.

Table B-1 below provides an overview of the parameters to be analyzed as part of the application package.

Table B-1. Overview of Sampling Requirements

Attachment B Table	Parameter(s) Covered ¹	Water to be Sampled
Sampling Requirements for All Discharges		
Table B-2	Priority Pollutants	EFF ²
Table B-3	Hardness-Dependent Priority Pollutants ³	EFF
None	Any 303(d) Listed Parameters ⁴	EFF
Additional Sampling Requirements for Discharges to Specific Waterbodies		
Tables B-4 and B-5	Total Dissolved Solids	EFF
Table B-6	Selenium	EFF
<p>1 The sampling requirements in terms of the parameters covered apply to all designated beneficial uses unless otherwise specified. MUN designated waters pertain to those receiving waters designated for municipal and domestic water supply, and Non-MUN designated waters pertain to those receiving waters designated for one or more of the other use categories. <i>Consult section III.H of the Limitations and Discharge Requirements for further information concerning designated use categories.</i></p> <p>2 EFF = effluent water</p> <p>3 Several of the priority pollutant metals are hardness-dependent and require that a sample of the receiving water be analyzed for hardness.</p> <p>4 If the proposed receiving water is listed as impaired by any parameter on California's latest 303(d) List, then the Discharger shall analyze for the listed parameter(s). Consult the following Web site for the latest 303(d) List: http://www.swrcb.ca.gov/water_issues/programs/tmdl/303d_lists2006_epa.shtml.</p>		

Dischargers shall analyze all applicable pollutants in this Attachment in accordance with the analytical methods and other requirements specified in Part 136 of Title 40 of the Code of Federal Regulations (CFR) and in accordance with section I of the Monitoring and Reporting Program (Attachment E) of this General Board Order.

For priority pollutant constituents with applicable water quality criteria, detection limits shall be below the screening level. If the lowest minimum level (ML) published in Appendix 4 of the SIP

is not below the screening level, the detection limit shall be the lowest ML. For priority pollutant constituents without applicable water quality criteria, the detection limits shall be equal to or less than the lowest ML published in Appendix 4 of the SIP.

Detection, for the purposes of the priority pollutants with applicable water quality criteria, means a sample result that is greater than or equal to the detection limit. Sample results less than the ML, but greater than or equal to the detection limit, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported, and shall be used to compare to the applicable screening level for purposes of determining whether effluent limitations are necessary.

Detection, for the purposes of the priority pollutants without applicable water quality criteria, means a sample result that is greater than or equal to the applicable screening level (i.e., the lowest ML specified in the SIP).

II. ANALYSES REQUIRED OF ALL DISCHARGERS

A. Priority Pollutants. All Dischargers seeking authorization to discharge under this General Board Order shall sample and analyze the proposed effluent for the priority pollutants contained in Tables B-2 and B-3. The results of the analyses shall be compared to the corresponding screening levels and shall be submitted as part of the NOI.

Table B-2. Screening Levels for Priority Pollutants

Parameter	Screening Levels ¹		Minimum Levels (MLs) (µg/L)
	Municipal Designated Waters (µg/L) ²	Non-Municipal Designated Waters (µg/L) ²	
<i>Volatile Organics</i>			
1,1-Dichloroethane	5	5	1
1,1-Dichloroethylene	0.057	3.2	0.5
1,1,1-Trichloroethane	200	200	2
1,1,2-Trichloroethane	0.6	42	0.5
1,1,2,2-Tetrachloroethane	0.17	1	0.5
1,2-Dichlorobenzene	600	600	0.5
1,2-Dichloroethane	0.38	99	0.5
1,2-Dichloropropane	0.52	39	0.5
1,2-Cis-Dichloroethylene	6	10	N/A
1,2-Trans-Dichloroethylene	10	10	1
1,3-Dichlorobenzene	400	2,600	2
1,3-Dichloropropylene	0.5	0.5	0.5
1,4-Dichlorobenzene	5	0.5	0.5
2-Chloroethyl-vinyl-ether	1 ³	1 ³	1
Acetone	700	700	N/A
Acrolein	320	780	5
Acrylonitrile	0.059	0.66	2
Benzene	1.0	1.0	0.5
Bromoform	4.3	360	0.5
Carbon Tetrachloride	0.25	0.5	0.5
Chlorobenzene	680	21,000	2
Chlorodibromomethane	0.41	34	0.5
Chloroethane	300	300	2
Chloroform	100	100	2
Dichlorobromomethane	0.56	46	0.5

Parameter	Screening Levels ¹		Minimum Levels (MLs) (µg/L)
	Municipal Designated Waters (µg/L) ²	Non-Municipal Designated Waters (µg/L) ²	
Di-isopropyl Ether	5	5	N/A
Ethanol	760,000	760,000	N/A
Ethylbenzene	700	700	2
Ethylene Dibromide	0.05	0.05	N/A
Hydrocarbons, Total Petroleum	100	100	N/A
Methanol	3,500	740,000	N/A
Methyl Bromide	10	4,000	2
Methyl Chloride	3	3	0.5
Methyl ethyl ketone	700	700	N/A
Methyl tertiary-butyl ether	13	13	N/A
Methylene Chloride	4.7	1,600	0.5
Tertiary-amyl-methyl ether	5	5	N/A
Tertiary Butyl Alcohol	12	12	N/A
Tetrachloroethylene	0.8	8.85	0.5
Toluene	150	150	2
Trichloroethylene	2.7	5	0.5
Trichlorofluoroethane	1,200	4,000	N/A
Vinyl Chloride	0.5	0.5	0.5
Xylenes	20	1,750	N/A
Semi-Volatile Organics			
1,2-Diphenylhydrazine	0.04	0.54	1
1,2,4-Trichlorobenzene	70	--	5
2-Chlorophenol	120	400	5
2,4-Dichlorophenol	93	790	5
2,4-Dimethylphenol	540	2,300	2
2,4-Dinitrophenol	70	14,000	5
2,4-Dinitrotoluene	0.11	9.1	5
2,4,6-Trichlorophenol	2.1	6.5	10
2,6-Dinitrotoluene	5 ³	5 ³	5
2-Nitrophenol	10 ³	10 ³	10
2-Chloronaphthalene	1,700	4,300	10
3,3'-Dichlorobenzene	0.04	0.077	5
3-Methyl-4-Chlorophenol	1 ³	1 ³	1
2-Methyl-4,6-Dinitrophenol	13	765	5
4-Nitrophenol	5 ³	5 ³	5
4-Bromophenyl phenyl ether	5 ³	5 ³	5
4-Chlorophenyl phenyl ether	5 ³	5 ³	5
Acenaphthene	1,200	2,700	1
Acenaphthylene	10 ³	10 ³	10
Anthracene	9,600	110,000	5
Benzidine	0.00012	0.00054	5
Benzo(a)Anthracene	0.0044	0.049	5
Benzo(a)Pyrene	0.0044	0.049	2
Benzo(b)Fluoranthene	0.0044	0.049	10
Benzo(g,h,i)Perylene	5 ³	5 ³	5
Benzo(k)Fluoranthene	0.0044	0.049	2
Bis(2-Chloroethoxyl)Methane	5 ³	5 ³	5
Bis(2-Chloroethyl)Ether	0.031	1.4	1
Bis(2-Chloroisopropyl)Ether	1,400	170,000	10
Bis(2-Ethylhexyl)Phthalate	1.8	5.9	5
Butylbenzyl Phthalate	3,000	5,200	10
Chrysene	0.0044	0.049	5
Dibenzo(a,h)Anthracene	0.0044	0.049	1
Diethyl Phthalate	23,000	120,000	10
Dimethyl Phthalate	313,000	2,900,000	10
di-n-Butyl Phthalate	2,700	12,000	10

Parameter	Screening Levels ¹		Minimum Levels (MLs) (µg/L)
	Municipal Designated Waters (µg/L) ²	Non-Municipal Designated Waters (µg/L) ²	
di-n-Octyl Phthalate	10 ³	10 ³	10
Fluoranthene	300	370	10
Fluorene	1,300	14,000	10
Hexachlorobenzene	0.00075	0.00077	1
Hexachlorobutadiene	0.44	50	1
Hexachlorocyclopentadiene	50	17,000	5
Hexachloroethane	1.9	8.9	1
Indeno(12,3-cd)Pyrene	0.0044	0.049	0.05
Isophorone	8.4	600	1
N-Nitrosodimethyl amine	0.00069	8.1	5
N-Nitroso-di-n-propyl amine	0.005	1.4	5
N-Nitrosodiphenyl amine	5.0	16	1
Naphthalene	10 ³	10 ³	10
Nitrobenzene	17	1,900	10
Pentachlorophenol	0.28	7.9	1
Phenanthrene	5 ³	5 ³	5
Phenol	21,000	4,600,000	50
Pyrene	960	11,000	10
Metals and Other Compounds			
Antimony, Total Recoverable	14	4,300	5
Arsenic, Total Recoverable	50	36	10
Beryllium, Total Recoverable	4	--	0.5
Cadmium, Total Recoverable	Refer to Table B-3		
Chromium (III)	Refer to Table B-3		
Chromium (VI)	11	50	5
Copper, Total Recoverable	Refer to Table B-3		
Cyanide, Free	5.2	--	5
Lead, Total Recoverable	Refer to Table B-3		
Mercury, Total Recoverable	0.050	0.051	0.2
Nickel, Total Recoverable	Refer to Table B-3		
Selenium, Total Recoverable	5.0	71	2
Silver, Total Recoverable	Refer to Table B-3		
Thallium, Total Recoverable	1.7	6.3	1
Zinc, Total Recoverable	Refer to Table B-3		
Asbestos	7 MFL ⁴	7 MFL ⁵	--
2,3,7,8-TCDD	1.3 x 10 ⁻⁸	1.4 x 10 ⁻⁸	--
Pesticides and PCBs			
4,4'-DDD	0.00083	0.00084	0.05
4,4'-DDE	0.00059	0.00059	0.05
4,4'-DDT	0.00059	0.00059	0.01
alpha-Endosulfan	0.056	0.0087	0.02
alpha-BHC	0.0039	0.013	0.01
Aldrin	0.00013	0.00014	0.005
beta-Endosulfan	0.056	0.0087	0.01
beta-BHC	0.014	0.046	0.005
Chlordane	0.00057	0.00059	0.1
delta-BHC	--	--	0.005
Dieldrin	0.00014	0.00014	0.01
Endosulfan Sulfate	110	240	0.05
Endrin	0.036	0.0023	0.01
Endrin Aldehyde	0.76	0.81	0.01
Heptachlor	0.00021	0.00021	0.01
Heptachlor Epoxide	0.0001	0.00011	0.01
gamma-BHC	0.019	0.063	0.02
PCBs, sum of ⁶	0.00017	0.00017	0.5
Toxaphene	0.00073	0.00075	0.5

¹ The screening levels for MUN designated waters were established based on the maximum contaminant level (MCL) and California Toxics

Parameter	Screening Levels ¹		Minimum Levels (MLs) (µg/L)
	Municipal Designated Waters (µg/L) ²	Non-Municipal Designated Waters (µg/L) ²	
	Rule (CTR) criteria for the protection of aquatic life or for the protection of human health for consumption of water and organisms, whichever was the more stringent. The screening levels for Non-MUN designated waters were established based on CTR criteria for the protection of aquatic life or human health for the consumption of organisms only, whichever was the more stringent.		
2	µg/L = micrograms per liter		
3	Priority pollutants for which no applicable MCLs or CTR criteria for the protection of human health or aquatic life exist include beryllium, chloroethane, 2-chloroethylvinyl ether, chloroform, 1,1-dichloroethane, methyl chloride, 1,1,1-trichloroethane, 2-nitrophenol, 4-nitrophenol, 3-methyl-4-chlorophenol, acenaphthylene, benzo(ghi)perylene, bis(2-chloroethoxy)methane, 4-bromophenyl phenyl ether, 4-chlorophenyl phenyl ether, 2,6-dinitrotoluene, di-n-octyl phthalate, naphthalene, phenanthrene, 1,2,4-trichlorobenzene, delta-BHC, and asbestos (non-MUN only). The screening level for these parameters is based on the lowest minimum level (ML) contained in the SIP.		
4	MFL = million fibers per liter		
5	There are no applicable MCLs or CTR criteria for the protection of human health (consumption of organisms only) or aquatic life for asbestos for non-MUN designated waters. There is also no applicable ML for asbestos in the SIP. Therefore, the screening level for asbestos for non-MUN designated waters is equivalent to the CTR criterion for the protection of human health (consumption of water and organisms). If the discharge exceeds this screening level, effluent limitations will not be required, but the Discharger will be required to conduct additional monitoring as specified in the NOA from the Executive Officer.		
6	The screening level applies to the sum of Aroclors 1242, 1254, 1221, 1232, 1248, 1280, and 1016.		

Table B-3. Screening Levels for Hardness-Dependent Priority Pollutant Metals

Receiving Water Hardness (mg/L as CaCO ₃)	Most Stringent CTR Water Quality Criterion (µg/L)						
	Cadmium	Chromium (III)	Copper	Lead	Nickel	Silver	Zinc
1 – 10	0.07	4.8	0.18	0.01	1.1	0.01	2.4
11 – 20	0.44	34	1.4	0.19	8.1	0.09	18
21 – 30	0.72	58	2.5	0.44	14	0.28	32
31 – 40	0.98	79	3.4	0.72	19	0.54	44
41 – 50	1.2	100	4.4	1.0	25	0.88	56
51 – 60	1.5	120	5.2	1.4	30	1.3	68
61 – 70	1.7	140	6.1	1.7	34	1.7	79
71 – 80	1.9	160	7.0	2.1	39	2.3	90
81 – 90	2.1	170	7.8	2.4	44	2.8	100
91 – 100	2.3	190	8.6	2.8	48	3.5	110
101 – 110	2.5	210	9.4	3.2	53	4.1	120
111 – 120	2.7	230	10	3.6	57	4.9	130
121 – 130	2.9	240	11	4.1	61	5.6	140
131 – 140	3.0	260	12	4.5	66	6.5	150
141 – 150	3.2	270	13	4.9	70	7.3	160
151 – 160	3.4	290	13	5.4	74	8.2	170
161 – 170	3.6	310	14	5.8	78	9.2	180
171 – 180	3.8	320	15	6.3	82	10	190
181 – 190	3.9	340	15	6.8	86	11	200
191 – 200	4.1	350	16	7.3	90	12	210
201 – 210	4.3	370	17	7.7	94	13	220
211 – 220	4.4	380	18	8.2	98	15	230
221 – 230	4.6	400	18	8.7	100	16	230
231 – 240	4.8	410	19	9.2	110	17	240
241 – 250	4.9	430	20	9.7	110	18	250
251 – 260	5.1	440	20	10	110	20	260
261 – 270	5.2	450	21	11	120	21	270
271 – 280	5.4	470	22	11	120	23	280
281 – 290	5.5	480	23	12	130	24	290
291 – 300	5.7	500	23	12	130	25	300
301 – 310	5.8	510	24	13	130	27	300
311 – 320	6.0	520	25	13	140	29	310
321 – 330	6.2	540	25	14	140	30	320

Receiving Water Hardness (mg/L as CaCO ₃)	Most Stringent CTR Water Quality Criterion (µg/L)						
	Cadmium	Chromium (III)	Copper	Lead	Nickel	Silver	Zinc
331 – 340	6.3	550	26	15	140	32	330
341 – 350	6.5	570	27	15	150	33	340
351 – 360	6.6	580	27	16	150	35	350
361 – 370	6.7	590	28	16	150	37	360
371 – 380	6.9	610	29	17	160	39	360
381 – 390	7.0	620	29	17	160	41	370
391 – 400	7.2	630	30	18	170	42	380
> 400	7.3	650	31	19	170	44	390

B. Hardness – Receiving Water. All Dischargers seeking authorization to discharge under this General Board Order shall sample and analyze the proposed effluent and receiving water for total hardness (measured as CaCO₃). The results of the analyses shall be submitted with the completed NOI.

C. Section 303(d) Parameters. If the proposed receiving water is listed as impaired on the latest 303(d) List, the Discharger shall analyze a representative sample of the discharge for the affected parameter(s) and submit the results with the completed NOI. The latest 303(d) List may be found at:
http://www.swrcb.ca.gov/water_issues/programs/tmdl/303d_lists2006_epa.shtml.

III. Waterbody or Designated Use Specific Analyses Required

The Basin Plan establishes limitations for the discharge of certain pollutants to specific waterbodies. Dischargers proposing to discharge treated groundwater from cleanup of VOCs under this General Board Order to the New River, Alamo River, Imperial Valley Drains, Coachella Valley Drains, Palo Verde Valley Drains, and to tributaries to the Salton Sea shall analyze a representative sample of the discharge for the parameters indicated in Tables B-4 through B-6 below, as applicable, and compare the results to the screening levels noted. The Discharger shall submit the results of all analyses performed with the completed NOI.

Table B-4. Analysis Requirements for Discharges to the New River, Alamo River, and the Imperial Valley Drains

Parameter	Units	Screening Level
Total Dissolved Solids	mg/L	4,000

Table B-5. Analysis Requirements for Discharges to the Coachella Valley Drains and the Palo Verde Valley Drains

Parameter	Units	Screening Level
Total Dissolved Solids	mg/L	2,000

Table B-6. Analysis Requirements for Discharges to the Tributaries to the Salton Sea

Parameter	Units	Screening Level
Selenium	mg/L	0.005